

TAXONOMIC NOTES ON CERTAIN TAXA OF ASIATIC ANGIOSPERMS

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During my studies in the Indian flowering plants, some of the results obtained on the taxonomy, identity and nomenclature of certain taxa of Asiatic angiosperms are published here for practical reasons. The types mentioned have been studied except where indicated to the contrary.

EUSTERALIS Rafin. (1836) (Labiatae).

El-Gazzar & L. Watson (1967) from their studies involving 37 species belonging to the genera Pogostemon Desf. (1815) and Dysophylla Bl. (1836) divided them into two distinct groups, Group 1 comprising 26 species and Group 2, 11 species. They transferred four species of Dysophylla Bl. including the type species D. auriculata (L.) Bl. to Pogostemon Desf., representing the species of Group 1 and kept apart the 11 species of Group 2 to represent the genus Dysophylla auctt., non Bl. (1826). Since the type species of Dysophylla Bl. was transferred to Pogostemon Desf., Airy Shaw (1967) proposed conservation of the new genus Dysophylla El-Gazzar & L. Watson ex Airy Shaw with D. quadrifolia (Benth.) El-Gazzar & L. Watson ex Airy Shaw as the type species. While doing so, he argued why the generic name Chotekia Opiz & Corda is not available for the species of the section VERTICILLATAE Benth. (1848), but did not say why Eusteralis Rafin. (1836), a validly described genus, could not be used instead. His formal proposal No. 200 (see Taxon 16:190, 1967) for such proposed conservation, has, it is understood, been rejected. Airy Shaw (1973:397, 447) now considers Dysophylla El-Gazzar & L. Watson ex Airy Shaw as congeneric and synonymous with Eusteralis Rafin. It is pertinent to point out that Rafinesque's description and comments on the genus Eusteralis with E. pumila (Grah.) Rafin. as the type and sole species, leave no doubt as regards its suitability to include the species of the section VERTICILLATAE sensu Benth. However, in consideration of the very brief description of the genus Eusteralis Rafin., when published, the following emended description is furnished (see El-Gazzar &

L. Watson, 1967: 187): Leaves verticillate, 3-10 in a whorl, linear, sessile and usually glabrous; calyx tubular, 5-dentate; corolla subequally quadrifid; stamens 4, equal, exserted; filaments bearded; anthers terminal, unilocular and transversely dehiscent; helophytic herbs, "with stems generally aerenchymatous and crystals usually present in the calyx.

This resuscitation of the genus Eusteralis Rafin. necessitates the transfer of seventeen species of Dysophylla, mainly from the Indian region, to Eusteralis and of one species to the genus Fogostemon Desf. The nomenclatural check up has resulted in proposing a new name (nom. nov.) for Dysophylla stellata auctt., non Benth. (1830) and which is named here as Eusteralis deccanensis as the species is endemic in South India.

1. EUSTERALIS PUMILA (Grah.) Rafinesque, Fl. Torull. 2: 95 (1836/37).

Mentha (?) pumila Grah. in Edinb. New Phil. Journ. 4: 393 (1828).

Type: Nepal, "the seeds of this plant were obtained from Nepal by Capt. Macgill.... sent to us in 1827. The seedlings were kept in the stove and never transplanted.... "Dec. Jan.", Graham s.n. (not seen).

Dysophylla crassicaulis var. pumila (Grah.) Hook. f., Fl. Brit. Ind. 4: 640 (1885).

Clarke 23691 B collected from Madhya Pradesh, Raipur, Chumba, 915 m, on 15 Oct. 1874 and identified with D. crassicaulis Benth. var. amoena C. B. Clarke, represents a mere variant of E. pumila.

Distribution: India, Nepal.

2. EUSTERALIS STELLATA (Lour.) Panigrahi, comb. nov.

Mentha stellata Lour., Fl. Cochin. 2: 361 (1790), non Buch.-Ham. ex Roxb. (1832). Type: "Habitat loca humida inculta in Cochinchina", Loureiro s.n. (BM). Dysophylla verticillata Benth. [Wall. Cat. no. 1544, 1828, nom. nud.] in Wall. Pl. Asiat. Rar. 1: 30 (1830), et Lab. Gen. et Sp. 1: 159 (1832-36); Hook. f., Fl. Brit. Ind. 4: 639 (1885). Type: Bangladesh. Sylhet, Wallich 1544.1 (K-WALL.). Mentha verticillata Roxb. [Hort. Beng.: 44 (1814, nom. nud.)], Fl. Ind. 3: 5 (1832), non Linn. (1759), nec D. Don (1825). Type: East India, Roxburgh 159 (K). Dysophylla stellata (Lour.) Benth.

in Wall., Pl. Asiat. Rar. 1:30(1830), pro parte, incl. typo, excl. descript. et et synonym.; Li Hsi-Wen in Acta Phytotax. Sin. 13(1):75(1975), non Benth. (1832-'36). D. benthamiana Hance in Ann. Sci. Nat. V, Bot. 5:234(1866); Merrill in Trans. Amer. Phil. Soc. New Ser. 24(2):342(1935). Type: "In stagnis circa Cantonem, m. Aug. a. 1864, Sampson (Herb. No. 11448)(BM, K). D. ramosissima Benth. in Wall. Cat. No. 1543, pro parte, 1828, et Wall., Pl. Asiat. Rar. 1:30(1830) in synon, nom. nud.

Distribution: China, Japan, Formosa, India, Nepal, Bangladesh, Sri Lanka, Thailand, Viet Nam, Java, Australia.

Bentham(1830) made, what we may now call a new combination, Dysophylla stellata(Lour.) Benth. based on Mentha stellata Lour. (1790) and identified Wallich 1542 (K-WALL) with it and described it. He also made, viewed as above, another new combination, D. verticillata (Roxb.) Benth. based on Mentha verticillata Roxb. (1814) and referred to it Wallich 1544 and furnished a description. Since Roxburgh's name was not validly published until 1832 and even then was a later homonym for Mentha verticillata L. (1759), D. verticillata Benth. must be considered as a prop. nov. dating from 1830 (see 'Note' under Art. 72 of the International Code of Botanical Nomenclature, 1972). In 1832-36, however, Bentham realised that Mentha stellata Lour. was conspecific with D. verticillata Benth. (1830) but instead of adopting the earlier species epithet, he treated M. stellata Lour. as a synonym of D. verticillata Benth. and continued to adopt the name D. stellata Benth. (1830) for identifying specimens represented by Wallich 1542 from the South India. In this, he was wrong. I, therefore, propose here a new name Eusteralis deccanensis for the South Indian taxon in question.

Britten(1925) and Merrill(1935) recognised the conspecific nature of D. verticillata Benth. and Mentha stellata Lour., but instead of adopting D. stellata(Lour.) Benth. as the correct name for the taxon, Britten adopted D. verticillata Benth. and Merrill, D. benthamiana Hance.

3. EUSTERALIS DECCANENSIS Panigrahi, nom. nov.

Type: India. Kerala, Malabar, Wallich 1542 (labelled Mentha malabarica Herb. Heyne) (K-WALL, holotype; K-isotype). Synon: Dysophylla stellata auctt., Benth. in Wall. Pl. Asiat. Rar. 1:30(1830), pro parte, include

descript., excludo typum et synon; et Lab. Gen. et Sp. 1:159(1832-36); Roxb., Fl. Ind. 3:5(1832); Grah., Cat. Bomb. Pl.:150(1839); Lindley(?), Bot. Reg. t. 23(1845); Benth. in DC., Prodr. 12:158(1848); Hook. f., Fl. Brit. 4:640(1885); Gamble, Fl. Presid. Madras. 2(6):1137(1924); non (Lour.) 2770) Benth. (1830). Mentha stellata Buch.-Ham. ex Roxb., Fl. Ind. 3:5(1832); Dalzell & Gibson, Bomb. Fl.:209(1861); Cooke, Fl. Presid. Bombay 2:540 (1903/1958, reprint), non Lour. (1790). Type: India, Mysore, Buchanan-Hamil s.n. (BM). Mentha malabarica Heyne ex Benth. in Wall. Pl. Asiat. Rar. 1:30 (1830), in synon, nom. nud.

Distribution: South India.

4. EUSTERALIS CRASSICAULIS (Benth.) Panigrahi, comb. nov.

Dysophylla crassicaulis Benth., in Wall., Pl. Asiat. Rar. 1:30(1830), et Lab. Gen. et Sp. 1:159(1832-36); Hook. f., Fl. Brit. Ind. 4:640(1885), pro parte, excl. var. Type: Bangladesh, Sylhet, Sillet, Wallich 1545 (K-WALL).

Distribution: India, Bangladesh & Burma.

5. EUSTERALIS LINEARIS (Benth.) Panigrahi, comb. nov.

Dysophylla linearis Benth. in DC., Prodr. 12:157(1848); Hook. f., Fl. Brit. Ind. 4:639(1885). Syntype: [selected here as lectotype]: India, Assam, Dom^a Mack s.n. [Mrs. Mack] (K).

Distribution: China & India (Northern & Eastern).

6. EUSTERALIS GRACILIS (Dalz.) Panigrahi, comb. nov.

Dysophylla gracilis Dalz. in Hook. Journ. Bot. & Kew Gard. Misc. 2:337 (1850); Hook. f., Fl. Brit. Ind. 4:641(1885). Type: "... in montibus Syhadree, prope Phonda Ghaut; fl. Oct." (not seen).

I have examined three sheets in the Kew Herb. (K): one labelled, "Dysophylla gracilis Mihi in Hook., Dr. Ritchie 1988" in Dalzell's hand; 2nd sheet labelled "Dysophylla gracilis Dalz. in Hook.;" and the 3rd sheet labelled, "D. gracilis Dalz. in Hooker' hand and these must represent the type materials.

Distribution: India (Maharashtra & Karnatak).

7. EUSTERALIS ERECTA (Dalz.) Panigrahi, comb. nov.

Dysophylla erecta Dalz. in Hook. Journ. Bot. & Kew Gard. Misc. 2:337(1850); Hook. f., Fl. Brit. Ind. 4:641(1885). Type: "In stagnorum marginibus Provinciae Malwan, fl. Sept." (not seen).

I have examined one sheet, from Dalzell's Bombay Herb. and labelled "D. erecta fide Dalzell" in Hooker's hand and this must be regarded as an authentic material.

Distribution: India (Maharashtra).

8. EUSTERALIS TOMENTOSA (Dalz.) Panigrahi, comb. nov.

Dysophylla tomentosa Dalz. in Hook. Journ. Bot. & Kew Gard. Misc. 2:337(1850); Hook. f., Fl. Brit. Ind. 4:641(1885). Type: "in orgozotis Prov. Malwan, inter Deoghur et Viziadroog; fls. Dec." (not seen).

I have examined one sheet, labelled "Bombay, Dalzell" in Hooker's hand and "Dysophylla tomentosa" in Dalzell's hand (K) and this must be regarded as type material.

Distribution: India (Maharashtra & Karnataka).

9. EUSTERALIS GRIFFITHII (Hook. f.) Panigrahi, comb. nov.

Dysophylla griffithii Hook. f., Fl. Brit. Ind. 4:641(1885). Type: India. Orissa: Sambalpur, Griffith 13968 (K).

Distribution: India (Orissa).

10. EUSTERALIS HELFERI (Hook. f.) Panigrahi, comb. nov.

Dysophylla helferi Hook. f., Fl. Brit. Ind. 4:640(1885). Type: Burma. Tenasserim, East Pagoda, Helfer 13968 (K).

Distribution: Burma.

11. EUSTERALIS PEGUANA (Prain) Panigrahi, comb. nov.

Dysophylla peguana Prain in Journ. Asiat. Soc. Beng. 59:299(1891). Syntype: [selected here as lectotype], Burma, Pegu, 26.1.71, Kurz 2405 (K).

Distribution: Burma.

12. EUSTERALIS PENTAGONA (C.B. Clarke ex Hook. f.) Panigrahi, comb. nov.

Dysophylla pentagona C.B. Clarke ex Hook. f., Fl. Brit. Ind. 4:641(1885). Type: India. Bihar: Chota Nagpur, Singhboom. Bundgaol, alt.

2000' [28 Oct. 1873] Clarke [20438 A] (K).

Distribution: India (Madhya Pradesh & Bihar).

13. EUSTERALIS CRUCIATA (Benth.) Panigrahi, comb. nov.

Dysophylla cruciata Benth. in Wall., Pl. Asiat. Rar. 1:30 (1830);
Hook. f., Fl. Brit. Ind. 4:639 (1885). Type: Nepal, 1821, Wallich 1541
(K-WALL).

Distribution: China ; India. and Nepal.

14. EUSTERALIS STOCKSII (Hook. f.) Panigrahi, comb. nov.

Dysophylla stocksii Hook. f., Fl. Brit. Ind. 4:642 (1885). Type: India.
Maharashtra, Concan, Stocks s.n. (K).

Distribution: India (Maharashtra).

15. EUSTERALIS QUADRIFOLIA (Benth.) Panigrahi, comb. nov.

Dysophylla quadrifolia Benth. in Wall. Pl. Asiat. Rar. 1:30 (1830);
Hook. f., Fl. Brit. Ind. 4:639 (1885). Type: India, Roxburgh s.n.
(labelled Mentha quadrifolia) (BM, K). D. velutina Benth., l.c.:30
(1830) in synon. nom. nud.

Apart from the type I have also examined the specimens labelled
"Toong, Wallich 1538 (labelled Dysophylla velutina Benth, and
H.B.C., 1823, Wallich 1539 (K, K-WALL) labelled Dysophylla quadri-
folia Benth. and " Venkata Cotery, Dec. 1800, labelled Mentha
tetraphylla Roxb. (BM), which are identified here as E. quadri-
folia.

Distribution: China, India, Bangladesh, Burma and Sri Lanka.

16. EUSTERALIS SAMPSONI (Hance) Panigrahi, comb. nov.

Dysophylla sampsoni Hance in Ann. Sc. Nat. Ser. V, Bot. 5:234 (1866).
Type: " In udis circa Cantonem, 1863 [1864], Sampson (Herb. H. F.
Hance, 10946) (BM, K).

Distribution: China.

17. EUSTERALIS YATABEANA (Makino) Panigrahi, comb. nov.

Dysophylla yatabeana Makino in Bot. Mag. Tokyo 12:55 (1898). Syntype:

[selected here as lectotype], Japan. Tokyo, Prov. Mushashi, Koiwa-Marui,
cult. Herb. Sc. College, Imp. Univ. Tokyo, 15 Sept. 1883 (K).

Distribution: Japan.

POGOSTEMON Desf. (1815) (Labiatae).

18. POGOSTEMON ANDERSONI (Prain) Panigrahi, comb. nov.

Dysophylla andersoni Prain in Journ. Asiat. Soc. Beng. 59: 298 (1891).

Type: Sikkim, Tarai, 9 Feb. 1867, T. Anderson s.n. (K).

Distribution: India (Sikkim).

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